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Nurses Perceptions of Barriers and Facilitators to Research Utilization in their Nursing Practice

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SO5

Dear Dr Connolly,

David and I have finally met
the deadline.

Enclosed are

- 1) signature form
- 2) proof of submission
- 3) 2 copies of the manuscript
- 4) a pretty flower for your support.

Chris Ly

NURSES PERCEPTIONS OF BARRIERS AND FACILITATORS TO RESEARCH
UTILIZATION IN THEIR NURSING PRACTICE

A Research Study Manuscript

Presented to

Dr. Phyllis Connolly

Graduate Coordinator

School of Nursing

By

David Ray Renfro

Chia-Ling Mao

Alice Naqvi

May 25, 2005

ABSTRACT

Today in nursing we are driven in the direction of evidence based practices. The nursing profession must continue to encourage nurses to ask “Why” when providing interventions. We must ensure that the interventions provided are both warranted, and the most efficacious intervention achievable. As a profession, we can no longer stand on our methods of practice simply because it is the way we have always practiced. It is a challenge for nursing leaders to implement a culture of evidence based practice, and to promote research utilization.

The purpose of this study was to identify nurse’s perceptions of barriers and facilitators to utilization of research findings into their nursing practice. The findings from this research are valuable in Nurse Leaders’ efforts to improve research utilization in nursing practice, thus improving patient outcomes, patient satisfaction, and improving the nurse-patient relationship.

The BARRIERS tool created by Funk, and a demographics survey were used for data collection. The target population included all Registered Nurses who are employed at the Veterans Affairs Health Care System in Silicon Valley. There were 102 participants in this study. Nearly half (49%) of the participants were over the age of 51, and nearly 80% of them had obtained a Bachelors degree or higher.

In the free text portion of the survey, three distinct themes were identified: 1) Educational Support, 2) Organizational Influence, and 3) Time Factors. Nurses listed the number one barrier to research utilization as “There is insufficient time on the job to implement new ideas”, and the primary facilitator was listed as “having the support from administration to participate in research”. These are only some of the findings that will

provide direction for nursing leaders in the Veterans Affairs setting. Knowing these barriers and facilitators will assist them in promoting evidence based nursing practice.

Key Words for Research Project

Advanced Nursing Practice

Research in Practice

Clinical Judgment

Evidence Based Practice

Clinical Guidelines

Clinical Thinking

SUMMARY

What is already known about this topic:

- There have been at least 19 studies completed utilizing the BARRIERS tool created by Funk (1991). Each of these studies elicited the primary barriers for their specific environment.
- Hunt (1996) states that practitioners do not utilize research findings for the following reasons, 1) nurses don't know about the research findings, 2) they don't understand the findings, 3) they don't trust the findings, 4) they don't know how to utilize the findings, 5) they are not permitted to use the research findings.
- Valente (2003) states that even though nurses have a desire to participate in research there are perceived barriers that prevent its utilization, and she states them as, 1) lack of time to apply the research, 2) insufficient autonomy, 3) lack of support from peers.

What this study adds:

- This study has been implemented utilizing the BARRIERS tool with a brief demographics survey to critically assess the target population and elicit the barriers for this specific population.
- This study has a focus on Veterans Affairs (VA) nursing, as the population studied are employees at the VA in the Silicon Valley.
- VA Nurses provide a distinct culture of care, unlike the community. They care for Veterans with physical and emotional war-wounds. This aspect of the study brings a better understanding of the culture of VA nursing population.

INTRODUCTION:

The purpose of this study was to identify nurses' perceptions of barriers and facilitators to improve research utilization in their nursing practice. The findings from this study will be valuable in Nurse Leaders' efforts to improve research utilization in nursing practice, thus improving patient outcomes, patient satisfaction, and improving the nurse-patient relationship (Duffy & Hoskins, 2003). Identification of specific barriers is the missing link for improving research utilization. The BARRIERS tool created by Funk (1991) has been utilized in more than 19 research studies that questioned the barriers for research utilization.

Research utilization has a direct impact on the outcomes of our patients. Three primary benefits have been identified in previous research, 1) It may help us understand the patients' situation more thoroughly, 2) assess more accurately, and 3) intervene more effectively (Champagne et al., 1997). For these reasons, today's nursing practice needs to advance with evidence based changes. The nursing profession must move in the direction of asking "Why" we provide the interventions we do, ensuring the interventions are warranted, and are the most efficacious interventions possible. We can no longer stand on our methods of practice simply because it is the way we have always practiced (Hicks, 1996). It is a challenge for nursing leaders to implement change, and to ensure that the changes that are implemented are proven to be a best practice, or are an outcome of nursing research.

The definition of evidence based practice or evidence based nursing was best described by Simpson (2004), when she stated that "evidence based nursing is the process by which nurses make clinical decisions using the best available research evidence, their

clinical expertise, and patient preferences” (pp 10). It is important to note that attempts within nursing leadership to place an emphasis on promoting evidence based practices in their daily practices is not new; it is just a growing movement. This effort has been promoted over the past thirty years in our nursing profession (Hunt, 1996).

This study allows nursing leaders to better evaluate their work environment and implement research utilization practices by clearly identifying the barriers to research utilization that are perceived by nursing staff. By implementing structures and frameworks that either dissolve or eliminate the barriers for staff, nurse leaders can overcome the barriers and promote more evidence based and scientific practice within their work environment.

DESIGN:

This study largely replicates a study done by Funk utilizing her tool, the BARRIERS scale, which includes two major parts: 29 quantitative and 6 qualitative questions (Funk et al., 1991). In addition to this tool, a 13- question demographics survey was utilized. The BARRIERS tool utilizes a Likert scale which rates barriers as: 1) To no extent, 2) To a little extent, 3) To a moderate extent, 4) To a great extent, and 5) No opinion. The four factors of the BARRIERS scale are (1) characteristics of the adopter (nurse), (2) characteristics of the organization, (3) characteristics of the innovation or the research itself and, (4) characteristics of the communication of research findings. This tool has already proven its validity and reliability in exploring what nurses perceive as their barriers and facilitators that impact their research utilization.

The Principal Investigator (PI) sought Institutional Review Board (IRB) approval at both San Jose State University, and Stanford IRB, which oversees research within the

Veterans Affairs Health Care System in Silicon Valley. Study participants were recruited within the health care system by posting flyers which explained the research, and by in-services provided on the various units to inform nurses of this opportunity. The confidentiality of the study participants was assured.

SAMPLE/PARTICIPANTS:

This study involves using a convenience sample with a total of 102 subjects. The majority of the subjects (80%) are from the Intensive Care Units, General Medical and Surgical Units and Ambulatory Care Clinics. Twenty subjects (24.4%) had less than a BS degree, 35 (42.7%) with a BS and 27 (32.9%) beyond a BS degree. Forty subjects (40%) have been in nursing for 26 or more years. Forty-nine subjects (49%) were age 51 or greater. Undoubtedly this population represents a “seasoned” group of nurses (See Table 1).

More than half of the subjects (65%) stated they had participated in a research project in the past, either as a data collector, a study participant, or a Principal Investigator. Seventy-one subjects (70%) belong to a professional nurse’s organization and slightly more than half (52.5%) are certified in a specialty of nursing. Eighty-one subjects (80%) indicated that they read nursing journals and 60% of them indicated that they surf websites for medical information (See Table1).

DATA COLLECTION METHODS:

The target population was approached about the opportunity to join this nursing research project both as a group and individually. Once the nurse voluntarily accepted the opportunity to join the study, the purpose of the study and instructions on how to complete the study were provided. The nurses were asked to complete the study at the

information session or they were provided a self addressed envelope to have the survey questionnaire sent to the PI.

The information sessions provided to subjects consisted of informing the participants about the purpose of the study, described the process of how they can join the study and indicated when the findings of the study would be available.

Demographics questionnaire and the Barriers scale were provided to each participant with a self addressed stamped envelope so that if they chose to join the study they could anonymously send in their completed survey forms. The consent for participation in the study was incorporated into the survey.

ETHICAL CONSIDERATIONS:

It is an ethical obligation for the nursing profession to provide patients with high quality care, and care that is evidence-based. Each patient intervention deserves to be the result of an evidence-based environment.

DATA ANALYSIS:

The data was collected in April of 2005, and was entered and analyzed by using SPSS. The demographic information was obtained to allow the PI to clearly describe the target population. The factors described by Funk were analyzed individually for their impact on the barriers or facilitators for research utilization. Descriptive statistics were used to present the subjects percentage of frequency of responses in ranking the moderate to high barriers. The free text portion of the study was analyzed by grouping them together to find common themes.

RESULTS/FINDINGS:

The subjects' responses from the BARRIERS tool were categorized by moderate to high barriers. Those barriers were then ranked by the highest percentage to the lowest percentage. Each item from the tool was analyzed by the factors, as described by Funk (Funk et al., 1991). The major barrier was focused on factor 2, characteristics of the organization (See Table 2).

Based on the data collected from the free text survey, three distinct themes that encompassed the barriers and facilitators of research utilization were identified as: 1) Educational Support, 2) Organizational Influence, and 3) Time Factors. These themes are inter-related and inter-dependent, thus, each component must have a portion of the focus. After the data was analyzed a model was created as shown in figure 1. Themes in the model closely resemble three of Funk's factors described in her theory, 1) characteristic of the adopter, 2) characteristics of the organization, and 3) characteristics of communication about the innovation.

In the Educational Support theme, common responses from the subjects included, "many nurses have a lack of understanding about research", "we don't have enough mentors or leaders to educate and guide us through research on the unit" and "some of us are associate degree (nurses) and don't understand the research". The Organizational Influence theme reflected, "Culture of thinking about research in the institution isn't favorable", "there are no benefits for nurses who participate in research", and "(there is a) lack of definition of nursing in the organization". The Time factor theme reflected "no time given to read research articles", "no time for me to leave the bedside", and "not

enough time is allotted to staff nurses for research.” The responses above clearly represent a shift toward the barrier category (See Table 3-A).

From the facilitator aspect the Educational Support theme, included responses such as: “(having) educational committees such as research or evidence based committee”, “having a chief nurse or associate chief nurse of research to mentor and guide through the process”, and “having classes like evidence based practice and generalize it to our area for each of us.” The organizational influence theme included responses such as: “providing facilities for staff education”, “organization making time for research”, and “(having) supportive administration.” The time factor theme included responses such as: “having enough time provided in your daily schedule (for research)”, “time to attend committees and seminars about evidence based practice”, and “having time to study basic research.” The responses above clearly represent a shift toward the facilitator category (See Table 3-B).

DISCUSSION:

A high constituency of the Veteran population of patients present with highly complex medical needs, suffer from poly substance abuse, and are more frequently subject to homelessness and poverty. Meeting their distinct needs, can be very challenging. Furthermore, creating a culture of evidence based practice compounds the demands of nursing and their leaders.

In analyzing this data it can be observed that the majority of the subjects of our sample are between 51 and 60 years old, whereas the average age of the nursing population in the San Francisco Bay Area is 43 (<http://www.thirdagecenter.com/Lobster%20Pot15.htm>). This data alone lets the nurse

leader know that they must utilize the adult learning theory when trying to initiate any intervention for their staff that may assist with overcoming a barrier, or implementing a facilitator. Speck (1996) states that transfer of learning for adults is not automatic, and must be facilitated. Mentoring, and coaching with consistent follow up is needed to assist adult learners with transferring their learning into daily practice, so that it is sustained.

In addition to the age of the subjects, their professional background becomes pertinent when looking at the professional knowledge of the subjects. Majority of the subjects (65%) have previously participated in research projects. Research involvement has become a Qualification standard for each nurse's proficiencies in the Veterans Affairs (VA) system. This organizational shift toward enforcing this national trend of evidence based practice involvement encourages nurses wanting to be promoted on the clinical ladder. In order to fulfill the qualification standards the professional nurse must maintain active participation in research activities. This shift supports the VA policy having research as a professional component for clinical ladder growth.

Regarding education, nurse leaders and educators need to increase the knowledge of nurses, not only in the area of methodology, but regarding basic concepts of nursing research, i.e., statistical analysis. Literature supports the concept that the advance practice nurse is in a position to link research and practice (Carroll et al., 1997). Question 3 of the BARRIERS tool states "statistical analysis are not understandable." If the nurse is unable to understand the statistics, the meaning or implication of the study may be misinterpreted. 63% of the subjects in this study rated question 3 as either a moderate or great barrier.

Another example of VA overcoming a barrier is the intervention initiated at the VA in Greater Los Angeles. They created a tool to assist staff nurses in understanding research outcomes. They have eliminated this barrier by creating one-page flyers that summarize a research study in lay terms. The flyers are created by their Advance Practice staff, and by volunteer nurses in their facility. This has proven to be a beneficial tool for them to disseminate valuable information to every level of nursing within their facility (Valente, 2003). Many of the perceptions stated by nurses as barriers are perceptions that could be easily corrected. Sharing the findings of this study could be the first intervention that leads to correcting misconceptions.

Regarding the time factor, 63% of the subjects responded that “there is insufficient time on the job to implement new ideas”. The nurse manager (NM) of a busy 24-bed Medical/Surgical and telemetry unit in a VA in Silicon Valley overcame this time barrier and was extremely successful. The NM of this unit provided staff time which was allotted in their daily duties. This time permitted them to complete research interventions or research activities. Making research activities a part of their daily routine ensured that there was staff coverage while they were off the unit or busy providing a research intervention. This telemetry unit had 78% of the licensed staff active with a 2.5 year research project. This creative style made their research project a success (Renfro, 2005).

The BARRIERS tool created by Funk could be utilized as a primary intervention before initiating a research project on a unit or in a department. It would provide the nurse leader or unit supervisor with the “known” barriers for that specific population and may prove to be beneficial in making the study or transition to an evidence based practice culture, a success.

The movement in the VA to become outcomes focused appears to be infusing nurses with excitement and drive. The VA appears to be creating its own culture of professional nursing. The subjects' eagerness to participate in this study was astonishing. The subjects in this study were highly engaged with the research process and the return rate of surveys supports this statement. 167 surveys were provided, and in four days, 102 (61%) of those surveys were returned. It was evident that the subjects had taken time to complete the survey with lengthily and thoughtful responses. Nurses that were not given the study tools have contacted the PI asking if they too could participate, and provide their input to the process. In addition, the Evidence Based Practice Committee has already asked if the PI will present this study to their committee. It is clear that this population has direction and momentum in the advancement of evidence based practice and the time to strike the iron is now!

CONCLUSIONS:

This study provides empirical data that leaders can adopt in their role of improving research utilization. Nurse leaders are expected to "raise the bar" and in doing so, transform nursing into a scientifically based profession where evidence based practice is the foundation and not just a goal. Nursing has the abundance of research, they have the tools and skill to analyze the outcomes, and with technology they have the ability to have access to this wealth of information at the patient's bedside, almost instantly.

This study provides measurable evidence for the nurse leader to promote change in research utilization. If the nurse leader can utilize these findings, they have begun the journey for research utilization. The ultimate goal is to enhance facilitators and eliminate or diminish barriers.

This study has provided insight to the three themes found from both the responses of qualitative and quantitative data. It has been identified that these three factors all need the nurse leader's focus. Interventions targeted at improving the educational support theme must be supported with interventions to assure that both the organizational influence and the time factors support the change. Each theme is equally weighted; there are no priorities within them. They are all inter-related and inter-dependent. The greater the expansion of all themes the more effective the efforts in improving research utilization will be (See Figure 1). However, this study shows that organizational characteristics take the lead in shifting the culture to an evidence based nursing practice.

The four factors Funk labeled for her Barriers tool were analyzed with the three themes gathered from the qualitative responses. The top ten barriers were from the factors 1) character of the adopter, 2) characteristics of the organization, and 3) characteristics of communication about the innovation. These three factors closely resemble the three themes identified in the qualitative themes (See Figure 1).

Knowing the themes are important, but knowing how the barriers and facilitators are related is even more important. Every barrier can be transformed into a facilitator ie: lack of time permitted for research can become a facilitator if the organization implements mandatory time for research activities. Knowing the barriers for your specific population is the first step. This process is continuous and changing. Obtaining optimum research utilization requires the transformation of barriers to facilitators. This strategy must be implemented by nursing leaders across the nation.

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TABLE 1
Demographic Data of the Subjects (N=102)

Variable	Number of Responses	Percentage of Responses
Education		
<BS	20	24.4
BS	35	42.7
>BS	27	32.9
Age		
>40 yr	20	20
41-50 yr	31	31
51-60 yr	37	37
61<	12	12
Years in Nursing		
0-10 yr	18	18.2
11-20 yr	25	25.2
21-30 yr	36	36.4
31<	20	20.2
Has participated in Nursing Research Project	64	62.7
Belong to a Professional Nurses organization	71	82
Has certification in nursing or specialty	53	52.5
Surfs web sites for health information	62	61.4
Reads Nursing Journals	81	80.2

Table 2 : Quantitative Item Ranking

Item #	%*	Rank	Questions Listed as Moderate to High Barriers	Quantitative Factor**
13	69.6	1	The nurse does not feel she/he has enough authority to change patient care procedures	2
3	63.7	2	Statistical analyses are not understandable	4
29	63.6	3	There is insufficient time on the job to implement new ideas	2
14	58.9	4	The nurse feels results are not generalizable to own setting	2
27	56.5	5	The amount of research information is overwhelming	na
7	54.9	6	The nurse does not have time to read research	2
5	52.9	7	The nurse is unaware of the research	1
25	52.9	8	Other staff are not supportive of implementation	2
2	50	9	Implications for practice are not made clear	4
15	48.5	10	The nurse is isolated from knowledgeable colleagues with whom to discuss the research	1
18	48	11	Physicians will not cooperate with implementation	2
26	48	12	The nurse is unwilling to change/try new ideas	1
28	47.1	13	The nurse does not feel capable of evaluating the quality of the research	1
12	45.8	14	The relevant literature is not compiled in one place	4
1	44.1	15	Research reports/articles are not readily available	3
6	43.1	16	The facilities are inadequate for implementation	2
16	43.1	17	The nurse sees little benefit for self	1
9	41.2	18	The nurse feels the benefits of changing practice will be minimal	1
10	41.2	19	The nurse is uncertain whether to believe the results of the research	3
19	39.2	20	Administration will not allow implementation	2
8	38.2	21	The research has not been replicated	3
24	38.2	22	The research is not reported clearly and readably	4
20	37.3	23	The nurse does not see the value of research for practice	1
4	36.3	24	The research is not relevant to the nurse's practice	4
23	35.3	25	The literature reports conflicting results	3
21	34.6	26	There is not a documented need to change practice	1
17	30.3	27	Research reports/articles are not published fast enough	3
22	21.5	28	The conclusions drawn from the research are not justified	3
11	20.5	29	The research has methodological inadequacies	3

* The subjects' responses from the tool were categorized by moderate to high barriers. Those barriers were then ranked by the highest percentage to the lowest percentage. Each item from the tool was analyzed by the Factors, as described by Funk.

** Factor 1-Characteristics of the Adopter: The nurses research values, skill and awareness
 Factor 2-Characteristics of the Organization: Setting barriers and limitations
 Factor 3-Characteristics of the Innovation: qualities of the research
 Factor 4- Characteristics of the Communication: presentation and accessibility of the research

Table 3-A

Participant Barriers Statements

Organizational Influence:	Educational Support:	Time Factor:
"Culture of thinking about research in the institution isn't favorable"	"Many nurses have a lack of understanding about research"	"Were short staffed and can't make time for the research"
"Lack or definition of Nursing in the organization"	"We don't have enough mentors or leaders to educate and guide us through research on the unit"	"Not enough time allotted to staff nurses for research"
"Administration is resistant to change"	"Not enough support for staff in analyzing and reading the research"	"No time given to read research articles"
"There are no benefits for nurses who participate in research"	"Some of us are Assoc. degree and don't understand the research"	"No time for me to leave the bedside"
		"Not practical for every setting"

Table 3-B

Participant Facilitator Statements

Organizational Influence: "Providing facilities for staff education"	Educational Support: "Having classes like EBP and generalize able to our area for each of us"	Time Component: "having enough time provided in your daily schedule"
"Organization making time for research"	"Having a Chief Nurse or Associate Chief Nurse of Research to mentor and guide through the process, and teach"	"Time to attend committees and seminars about EBP"
"Supportive Administration"	"Educational committees such as a Research or EBP Committee"	"Timing- ensuring that research is feasible with current events on unit"
"Having FTE for a team leader/mentor to help the nurse"		"Having time to study basic research"

Fig 1: Barrier and Facilitators to Research Utilization Model

